

ACCESSION NR: AP4013339

bacterioviridin, or only a mixture of the two latter. Concentration of the pigments was  $0.4-0.5 \times 10^{-5}$  mole/liter, and that of oxygen  $1.5 \times 10^{-3}$ . The chlorophylls were obtained from *Urtica*, the bacteriochlorophyll from *Rhodospirillum rubrum*, the viridin from *Chlorobium thiosulfatophilum* and *Chlorobium ethylicum*. Results showed that the potential of the primary unstable oxidation product of a and b chlorophylls was higher than the oxidizing potential of the corresponding bacterial pigment compound. Earlier data on the higher rate of destructive photooxidation of bacterial pigments compared to chlorophylls do not contradict the authors' findings, indicating rather the high instability of the primary oxidation products of the bacterial pigments and their tendency to change into stable oxides, particularly peroxides. The possible evolution of chlorophyll, with its greater range of photosensitizing properties, from its intermediate oxidation products is discussed, as well as its double role as primary oxidizer or reducer, according to conditions. The results presented support this assumption. Orig. art. has: 3 figures.

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ACCESSION NR: AP4013339

ASSOCIATION: Institut biokhimii im. A.M. Bakha Akademii nauk SSSR  
(Institute of Biochemistry, Academy of Sciences (SSSR))

SUBMITTED: 30May63

DATE ACQ: 26Feb64

ENCL: 00

SUB CODE: CH

NO REF SOV: 006

OTHER: 007

Card 3/3

ACCESSION NR: AP4034548

S/0020/64/155/005/1194/1197

AUTHOR: Komissarov, G. G.; Gavrilova, V. A.; Nekrasov, L. I.;  
Kobozev, N. I.; Yevstigneyev, V. B.

TITLE: Photosensitizing capacity of adsorbed carotene

SOURCE: AN SSSR. Doklady\*, v. 155, no. 5, 1964, 1194-1197

TOPIC TAGS: photosynthesis, photochemical reaction, redox system,  
 $\beta$  carotene, photosensitizing capacity, adsorbed  $\beta$  carotene

ABSTRACT: The photosensitizing capacity of  $\beta$ -carotene adsorbed on alumina gel or polyacrylonitrile has been studied to verify an assumption that besides chlorophyll, carotene in vivo might act as a sensitizing agent of some intermediate photochemical reaction occurring in the process of photosynthesis. The assumption was made on the basis of the structural similarity of the carotene molecule to sensitizers in photography (cyanin dyes) and to the photosensitive material of the eye (visual purple). In preliminary experiments, it was shown that  $\beta$ -carotene adsorbed on magnesia promoted decoloration of thyonine in the presence of ascorbic acid upon illumination with blue light. In quantitative experiments, the

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extinction coefficient was measured during the process of gradual decoloration of a methyl red solution containing ascorbic acid upon illumination with blue light and in the presence of synthetic  $\beta$ -carotene adsorbed on alumina gel or polyacrylonitrile. Plots of the absorption of light versus time show the photosensitizing capacity of the adsorbed  $\beta$ -carotene. The latter in a solution did not show this capacity. The mechanism of photosensitization of the photochemical reduction by adsorbed  $\beta$ -carotene is linked to its behavior in the form of a complex with albumen in physiological processes. Orig. art. has: 2 figures.

ASSOCIATION: Institut biokhimii im. A. N. Bakha, AN SSSR (Institute of Biochemistry, AN SSSR)

SUBMITTED: 09Oct63

DATE ACQ: 13May64

ENCL: 00

SUB CODE: CH

NO REF SOV: 012

OTHER: 010

Card 2/2

YEVSTIGNEYEV. V.B.; GAVRILOVA. V.A.

Oxidation-reduction potential of the photoreduced form of chlorophyll in pyridine. Biofizika 10 no.5:770-781 '65.

(MIRA 18:10)

1. Institut biokhimii imeni A.N.Bakha AN SSSR, Moskva.

VASHKOV, O.I.; GAVRILOVA, V.K.

Hydrogen absorption by titanium. Titan i ego splavy no.2:  
145-151 '59. (MIRA 13:6)

1. Institut metallurgicheskikh problem Tsentral'nogo nauchno-  
issledovatel'skogo instituta chernoy metallurgii.  
(Titanium--Hydrogen content)

BUYANOV, N.V.; VASHKOV, O.I.; GAVRILOVA, V.K.; KOROTKOV, V.F.

Spectrum determination of hydrogen in titanium. Titan i  
ego splavy no.2:174-178 '59. (MIRA 13:6)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy  
metallurgii.  
(Spectrum analysis) (Titanium—Hydrogen content)

83280

18.6200 also 2108, 2308

S/136/60/000/009/002/004  
E193/E483

AUTHORS: Borok, B.A., Gavrilova, V.K., Karpman, G.M.  
Trifonov, Ye.A. and Zavod, Ye.B.

TITLE: Manufacture of Titanium Tubes from Sintered Material  
by Extrusion and Rolling 10

PERIODICAL: Tsvetnyye metally, 1960, No.9, pp.66-68

TEXT: Shells (85 and 100 mm in diameter, 150 to 200 mm high), prepared by powder metallurgy technique from technical grade titanium IMPl, were extruded on a 600 t vertical extrusion press, equipped with die and mandrel made of steel 3KhV8. The shells were pre-heated to 860 to 1050°C by induction heating (5 to 10 min), the temperature of the container being 200 to 250°C. A mixture of graphite and machine oil was used as a lubricant. The extrusion pressure did not exceed 180 atm when the extrusion temperature was 800°C and decreased to below 150 atm for shells pre-heated to 950°C. The extrusion speed of 8 m/sec was used, the tubes obtained being 32 to 50 mm in diameter with the wall thickness varying between 2.5 and 7.5 mm. Irrespective of the extrusion temperature employed, the extruded tubes had longitudinal scratches on both outside and inside surfaces. ✓

Card 1/4



S/136/60<sup>82280</sup>/000/009/002/004  
E193/E483

**Manufacture of Titanium Tubes from Sintered Material by Extrusion and Rolling**

The surface finish of tubes extruded at temperatures above 950°C was extremely bad. The condition of the container and particularly of the mandrel, after one operation only, was also very bad, owing to titanium adhering to their surfaces, which was also the cause of the longitudinal scratches on the extruded tubes. Somewhat better results were obtained when steel R18 was used as the material of the container lining and mandrel, but even then these parts had to be scrapped after each operation. Several attempts were made to improve the surface finish of the tubes by applying different lubricants; the best results were obtained with a mixture containing 4 parts of sodium chloride and 1 part of fluorspar which, however, failed to prevent the formation of the longitudinal scratches. The extruded tubes (measuring 32 x 3, 39 x 2.5, 41 x 3 and 50 x 7.5 mm) had the following properties: U.T.S. = 70 kg/mm<sup>2</sup>; elongation,  $\delta$ , = 21%; reduction of area,  $\psi$ , = 29%; Rockwell hardness,  $R_c$  = 26. The material of the extruded tubes was markedly anisotropic in respect of its mechanical properties; micro-specimens, cut from the tubes and

Card 2/4

✓

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S/136/60/000/009/002/004  
E193/E483

Manufacture of Titanium Tubes from Sintered Material by  
Extrusion and Rolling

tested in the direction parallel to the tube axis, had  
U.T.S. = 104.6 kg/mm<sup>2</sup>,  $\delta$  = 26.2%, and  $\psi$  = 38.7%; the  
corresponding figures for specimens tested in the transverse  
direction were 120.8 kg/mm<sup>2</sup>, 2.5% and 6.3%. Owing to the  
lack of suitable equipment, the surfaces of the extruded tubes  
were not improved before rolling. The slight curvature of the  
tubes was removed by hammering with wooden mallets at 800°C.  
Both ends of each tube with bad extrusion defects were cut off  
and the outside and inside surfaces were lubricated with a mixture  
of 60% emulsol and 40% graphite, no lubricant having been fed to  
the mandrel. The rolling operation was carried out on a tube  
rolling mill of the Rockwright type. To avoid cracking during  
rolling, the ends of each tube were machined to produce a taper  
at least 60 to 80 mm long. After the first rolling operation,  
during which the temperature of the tubes rose to 100°C, the  
tubes were annealed at 700°C by resistance heating, the heating  
time varying between 20 and 40 sec. The ends of the tubes were  
then cut off again and tapered, after which the second rolling  
Card 3/4

X

83280

S/136/60/000/009/002/004

E193/E483

**Manufacture of Titanium Tubes from Sintered Material by Extrusion and Rolling**

operation was carried out. The degree of deformation attained in the first rolling operation, without causing fracture of the tube, was 34.2%. After the intermediate annealing operation, 56.7% reduction per pass could be attained. The tubes of the following dimensions (mm) were produced by this method: 22 x 1, 22 x 1.25, 22 x 1.5, 26 x 1.75, 26 x 2, 26.5 x 1.4, 29.8 x 1.6, 29.8 x 1.65, 34.5 x 2.4; the lengths of the tubes varied between 1500 and 6000 mm. While the results obtained showed that the technique studied had some possibilities, means of preventing adhesion of titanium on the extrusion tools will have to be found before it can become a manufacturing process. There is 1 table.

ASSOCIATIONS: TsNIIchermet

Kol'chuginskiy zavod im. Ordzhonikidze  
(Kol'chygin Works im. Ordzhonikidze)

UX

Card 4/4

BOROK, B.A., kand.tekhn.nauk; GAVRILOVA, V.K.; KARPAN, G.M.; KHROMOV, V.G.

Preparation of titanium strip by means of powder metal rolling.  
TSvet. met. 33 no.11:69-76 N '60. (MIRA 13:11)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii  
(for Borok, Gavrilova, Karpman). 2. Gor'kovskiy politekhnicheskii  
institut (for Khromov).  
(Titanium alloys--Metallography) (Powder metallurgy)

GAVRILOVA, V. M.

600

1. GAVRILOVA, V. M.

2. USSR (600)

"Geomagnetic disturbances and solar-activity impulses," Astron, Zhur., 17, No. 6,  
1940. Pulkovo observatory Dept of solar services.

9. Report U-1513, 23 Oct 1951

GRITSENKO, M.V., GAVRILOVA, V.M.

Forest Fires

Occurrence of forest fires in connection with weather conditions. Les. khoz. 5 No.4,  
1952.

Monthly List of Russian Accessions, Library of Congress, August, 1952. UNCLASSIFIED.

50-58-4-7/26

**AUTHOR:** Gavrilova, V. M.

**TITLE:** Shift of Cyclones Into Areas of Cold (O smeshchenii tsiklonov v oblast' kholoda)

**PERIODICAL:** Meteorologiya i Gidrologiya, 1958, Nr 4, pp 24 - 25 (USSR)

**ABSTRACT:** Ref Nr 1 states that the great majority of cyclones is generated under the influence of warm air and shift into the direction of the warm atmosphere. In reality we know of a shift as referred to in the title as well. In order to explain the causes of such a shift the ways of shift of the cyclones were checked in 1953 for a period of 9 months in the yevropeyskiy part of the Soviet Union. 47 cyclones out of 235 (= 20 %) shifted into areas of cold. This process occurred most frequently in January (Table 1). In 35 cases out of the mentioned 47 a fall in pressure was recorded below the area of cold. In only 12 cases cyclones were shifted at a rise of pressure and then filled up. 17 out of the 35 cyclones, mentioned in the paper, were filled up, whereas 18 deepened. In order to explain the causes of shift into the areas of cold, the causes of the change of pressure had to be found in the course of

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50-58-4-7/26

### Shift of Cyclones Into Areas of Cold

24 hours. In 48 cases computations were carried out on the changes of pressure on the surface of the earth. The cyclone of May 9, 1935 may serve as a typical example, which shifted in course of 24 hours from Kishinev to Kaunas. The level of zero-changes of pressure was recorded at altitudes of 5 km. Consequently the change in pressure was influenced by an air column of 5 km height. The average temperature of the layer which was 5 km thick amounted to  $+3,5^{\circ}\text{C}$ . The change of pressure of  $-7,0$  mb was found by multiplying with the corresponding coefficient. The tolerance between the computed pressure and the original one amounted to 2,2 mb (Table 3). As one can see from Table Nr 2 the increasing pressure on the surface of the earth in Kishinev was caused by the advection of cold in the column of air of a 5 km dimension. Consequently cyclones shift into areas of cold in the following cases: 1) If the change of pressure under the area of cold and the original pressure are less than the similar values under the areas of heat, then the cyclones will shift to those points where the smallest values are found; 2) If an advection of heat occurs in a layer between the surface of the earth and the level of the zero-changes of pressure; 3) If the pressure in the area of heat is much higher than

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50-58-4-7/26

Shift of Cyclones Into Areas of Cold

in the area of cold whereas the advection of heat remains constant in both areas. There are 3 tables and 2 Soviet references.

AVAILABLE: Library of Congress

1. Cyclones - Theory
2. Atmosphere - Applications

Card 3/3

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [ \ ] ^ _ ` {   } ~																																																																															
<p>ca</p> <p>113</p> <p>Pathogenesis of photodermatitis from chlorinated naphthalenes. V. M. Gavrilova. <i>Vestnik Venerol. Dermatol.</i> 1940, No. 3, 32-3. Polychloronaphthalenes cause professional dermatitis by initiation of photodermatitis and by disturbance of the follicular app. The initial stages are reversible and simple washing with benzene is quite effective. It is believed that the ailment is caused by a lowering of skin resistance, rather than by increased skin sensitivity. Protective mechanisms are destroyed by the toxic levels of polychloronaphthalenes. Activation of the polychloronaphthalene by light is believed to take place, rather than activation of epidermis reaction. G. M. K.</p>																																																																															
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GAVRILOVA, V. M.

Prevention of photodermatitis from coal tar. Vest. vener.  
Moskva no.4:22-23 July-Aug 1951. (CJML 21:1)

1. Candidate Medical Sciences. 2. Of the Dermatological  
Division (Head -- Prof. A. P. Dolgov), Institute of Labor  
Hygiene and Occupational Diseases of the Academy of Medical  
Sciences USSR (Head of Clinical Sector -- Prof. S. M. Genkin;  
Director --A. A. Letavet, Active Member of the Academy of  
Medical Sciences USSR).

BRAYTSEV, A.V.; GAVRILOVA, V.M.

Gumorous thyroiditis treated with penicillin. *DOVT. SP. 12* Moscow.  
13-14 June 1952. (CLML 22:4)

1. Of the Clinic for Skin-Venereal Diseases (Director -- Honored  
Worker in Science Prof. P. N. Grinchar), Second Moscow Medical In-  
stitute imeni I. V. Stalin.

GAVRILOVA, V.M.

Occupational arsenical hyperkeratosis associated with precancerous dyskeratosis (Bowen's) and with basal-cell carcinoma. Vest.ven. i derm. no.4:49-51 J1-Ag '55. (MLRA 8:12)

1. Iz kafedry kozhnykh i venericheskikh bolezney (zav.-prof. M.M.Zheltakov) Moskovskogo meditsinskogo instituta imeni I.V. Stalina.

(SKIN, neoplasms,  
arsenical hyperkeratosis with basal-cell carcinoma  
& Bowen's dis.)

GAVRILOVA, V.M.; SKRIPKIN, Yu.K.; SOMOV, B.A.; ABRAMOVA, Ye.I.

Selenium disulfide in the treatment of seborrhea. Vest.derm.i  
ven. no.7:45-49 '61. (MIRA 15:5)

1. Kz kafedry kozhnykh i venericheskikh bolezney II Moskovskogo  
meditsinskogo instituta imeni N.I. Pirogova (zav. - prof. M.M.  
Zheltakov).

(SEBACEOUS GLANDS—DISEASES) (SELENIUM SULFIDE—THERAPEUTIC USE)

GAVRILOVA, V.N.

~~Geology and petrology of intrusive complexes of the Leninogorsk~~  
region in the Rudnyy Altai. Biul.MOIP. Otd.geol. 31 no.4:103-  
104 J1-Ag '56. (MLRA 9:12)

(Altai Mountains--Rocks, Igneous)

~~CHERNOV, V.I.~~ <sup>V.N.</sup>  
CHERNOV, V.I.; GAVRILOVA, V.N.

Basic features of the geology and petrography of intrusive rocks  
in the Rudnyy Altai. Trudy VAGT no.3:99-119 '57. (MIRA 11:3)  
(Altai Mountains--Rocks, Igneous)



GAVRILOVA, V. N. *GAVRILOVA, V. N.*

"Manifestation of the Monastyrskiy Intrusive Complex in the Altai"

report delivered in the Petrographic Section, 4 April to 7 June 1957.

Chronicle of the Activity of the Petrography Section, Byulleten' Moskovskogo  
Obshchestva Ispytateley Prirody, Otdel Geologicheskii, 1957, No. 6, pp. 118-122, 1957.  
~~206~~

GAVRILOVA, V.N.; ZVYAGINTSEV, L.I.

Age of granitoids of the Zmeinogorsk intrusive complex in the Rudnyy  
Altai. Izv.vys.ucheb.zav.; geol. i razv. 1 no.5:40-49 My '58.  
(MIRA 12:2)

1. Moskovskiy geologorazvedochnyy institut imeni S. Ordzhonikidze.  
kafedra izverzhennykh i metamorficheskikh porod.  
(Altai Mountains--Granite)

SELYUK, Yelena Mikhaylovna, kand. tekhn. nauk; KARAUŠEV, A.V., kand. tekhn. nauk; VEYNERT, V.A., inzh.; Prinimali uchastiye: VESPE, V.Yu., mladshiy nauchnyy sotr.; GAVRILOVA, V.P., starshiy tekhnik; PROSKURYAKOV, A.K., kand. tekhn. nauk, otv. red.; MIRONENKO, Z.I., red.; SOLOVEYCHIK, A.A., tekhn. red.

[Investigation, calculation, and prediction of wind waves in reservoirs; practical manual] Issledovaniia, raschety i prognozy vetrovogo volneniia na vodokhranilishchakh; prakticheskoe posobie. Leningrad, Gidrometeor. izd-vo 1961. 220 p. — Nomograms.

(Waves)

(Reservoirs)

(MIRA 14:9)

GAVRILOVA, V. <sup>Y</sup><sub>E</sub>.

"Swine breeding" pavilion Moskva, Gos. izd-vo sel'khoz. lit-ry, 1954. 62 p.

KOMISSAROVA, A.N., metodist; BYKOVA, A.F., metodist po pchelovodstvu;  
GAVRILLOVA, V.Ye.; MININA, I.S.; CHERNOVA, I.D., metodist; BLIDMAN, A.O.

Exhibition of special items. Inform.biol.VDNKH no.5:23-31 My '64.  
(MIRA 18:5)

1. Pavil'on "Kartofel' i ovoshchi" na Vystavke dostizheniy narodnogo khozyaystva SSSR (for Komissarova). 2. Glavnyy metodist pavil'ona "Ptilovodstvo" na Vystavke dostizheniy narodnogo khozyaystva SSSR (for Gavrilova). 3. Glavnyy zootekhnik pavil'ona "Krolikovodstvo" na Vystavke dostizheniy narodnogo khozyaystva SSSR (for Minina). 4. Pavil'on "Mekhanizatsiya i elektrifikatsiya sel'skogo khozyaystva" na Vystavke dostizheniy narodnogo khozyaystva SSSR (for Chernova). 5. Glavnyy metodist i pavil'ona "Zhraneniye i pererabotka zerna" na Vystavke dostizheniy narodnogo khozyaystva SSSR (for Blidman).

RUBANOV, A.S.; METEL'SKIY, A.S.; GAVRILOVA, Ya.N.; KOGAN, A.Sh.

Calculating the entropy of probability distributions of coordinates  
and impulses in a harmonic oscillator. Dokl.AN BSSR 6 no.4:220-  
222 Ap '62. (MIRA 15:4)

1. Institut fiziki AN BSSR i Institut matematiki i vychislitel'noy  
tekhniki AN BSSR.

(Oscillations)

KUDRYAVTSEV, B.B.; GAVRILOVA, Ye., redaktor.

[Inaudible sounds] 0 neslyshimyykh zvukakh. [Moskva] Izd-vo  
TsK VLSM "Molodaya gvardiya," 1953. 148 p. (MLBA 7:8)  
(Ultrasonics)

CA  
GAVRILOVA, E.A.

118

Chromatographic determination of ascorbic acid in plant  
juices. R. P. Shamrai, R. A. Gavrilova, and V. V. Krav-  
chenko (Stanislavskii Med. Inst.). *Biokhimiya* 10, 604-10  
(1931).—Ascorbic acid in vegetables was chromatographed  
on filter paper in an atm. of H<sub>2</sub>. The solvent consisted of  
40 ml. BuOH, 10 ml. HOAc, and 4 ml. H<sub>2</sub>O. The de-  
veloper was AgNO<sub>3</sub>. The free and bound ascorbic acids  
were easily distinguished from each other chromatographi-  
cally. . . . H. Priestley (No 4)



SHNITSER, I.S., professor (Kislovodsk); GAVRILOVA, Ye.A. (Kislovodsk).

Effect of weather on hypertension. Klin.med. 31 no.10:28-31 0 '53.  
(MIRA 6:11)

1. Iz kafedry terapii i bal'neologii (zaveduyushchiy - professor I.S.Shnitser)  
TSentral'nogo instituta usovershenstvovaniya vrachei i sanatoriya im. I.V.  
Stalina (direktor O.A.Paukhov) Upravleniya Kislovodskogo kurorta.  
(Hypertension) (Climatology, Medical)

PASTUKHOV, A.I.; KLEYIN, A.L.; ANDREYEV, T.V.; MAZUN, A.I.;  
Prinimali uchastiye: MARKIN, A.A.; SKRIPCHUK, V.S.; KHARITONOV,  
Yu.A.; SELIUTIN, N. P.; GAVRILOVA, Ye. A.  
GAVRILOVA, Ye.A.

Steelmaking from vanadium cast iron in converters with a top  
oxygen blow. Stal' 21 no.12:1070-1074 D '61. (MIRA 14:12)  
(Steel—Metallurgy)  
(Oxygen—Industrial applications)

VOROB'YEV, A.Z.; GAVRILOVA, Ye.A.; KULESHOV, D.Ya.

Effect of the frequency of loading on the strength of aluminum  
alloys. Zav. lab. 29 no.10:1228-1230 '63. (MIRA 16:12)

GAVRILOVA, Ye.A.

Effect of trace elements on the yield, resistance to diseases,  
and phytocidal properties of tomatoes. Trudy VIZR no.21:  
41-50 pt.2 '64. (MIRA 18:12)

ACC NR: AP6028194

SOURCE CODE: UR/0032/66/032/006/0733/0736

AUTHOR: Vorob'yev, A. Z.; Gavrilova, Ye. A.; Dotsenko, A. M.

ORG: None

TITLE: The effect of rarely occurring compression cycles upon the endurance of a structural member

SOURCE: Zavodskaya laboratoriya, v. 32, no. 6, 1966, 733-736

TOPIC TAGS: *METAL TUBE, COMPRESSIVE STRESS.*  
mechanical fatigue, fatigue strength, fatigue test, alloy steel, duralumin / 30KhGSA alloy steel, D16T duralumin

ABSTRACT: The fatigue tests applied to the samples of tubes made of D16T duralumin and 30KhGSA alloy steel are discussed. The samples are shown in a figure and their mechanical properties are given in a footnote. The specimen were subjected to repeated cyclic loads with an intervention of rarely occurring compression cycles, as shown in a diagram. The cycles causing tensile stresses were of 0.1 - 0.25 and 22 cps, while the frequency of the compression cycle was 0.1 cps. The results of endurance tests are reflected in the graphs. The first graph represents a set of curves demonstrating that the rarely intervening compressive stresses considerably lower the endurance limits of tested samples. Another set of curves shows that a more frequent repetition of compression cycles causes a greater fatigue of material. The tests conducted with D16T samples proved that the

Cord 1/2

UDC: 620.178.3

ACC NR: AP6028194

effect of compression is greater if each cycle consisted of a series of repeated variable tensile and compressive stresses. In general, the endurance of material is lowered with the increase of compressive stress and probably with the decrease of basic tensile stress. Orig. art. has: 5 diagrams.

SUB CODE: 11, 13/ SUBM DATE: None / OTH REF: 002

Card 2/2

TISHCHENKO, V. V., GAVRILOVA, Te. K.

Leather.

Working out a quick method for determining moisture in leather. Vest. Len.  
un. 6 no. 9, 1951.

9. Monthly List of Russian Accessions, Library of Congress, September 1953, Uncl.

GAVRILOVA, Ye.I.

Anatomical and pharmacognostic study of the spindle tree (*Evonymus verrucosa*). Trudy Perm. farm. inst. no.1:86-100 '59. (MIHA 15:1)

1. Permskiy farmatsevticheskiy institut, kafedra farmakognozii.  
(SPINDLE TREE)



YAKOVLEV, L.S., kand. tekhn. nauk; GAVRILOVA, Ye.N., nauchn. red.

[Means for the overall mechanization of landing operations]  
Sredstva kompleksnoi mekhanizatsii reidovykh rabot. Moskva, TSentr. nauchno-issl. in-t informatsii i tekhniko-  
ekon. issledovaniil po lesnoi, tselliulczno-bumazhnoi, derevo-  
obrabatyvaiushchei promyshlennosti i lesnomu khoziaistvu,  
1963. 62 p. (MIRA 17:7)

1. Vsesoyuznyy zaochnyy lesotekhnicheskiiy institut (for  
Yakovlev).

LESHKEVICH, Andrey Ivanovich; GAVRILOVA, Ye.N., red.

[Bunching, leading, and unloading lumber into water]  
Shtabelevka, pogruzka i sbroska lesa na vodu. Moskva,  
Lesnaia promyshlennost', 1965. 250 p. (MIRA 18:6)

KELINA, I.M., kand. tekhn. nauk; DIOMIDOV, A.P., dotsent;  
GAVRILOVA, Ye.V., inzh.

Optimum size of machine classes in pneumatic preparation of  
high-ash lignites. Izv. vys. ucheb. zav.; gor. zhur. no.6:  
166-170 '61. (MIRA 16:7)

1. Sverdlovskiy gornyy institut imeni Vakhrusheva. Rekomendo-  
vana kafedroy obogashcheniya poleznykh iskopayemykh.  
(Coal preparation)

GAVRILOVA, Yu.

We met at the All-Union Agricultural Exhibition. IUn.nat.

no.10:2-3 0 '57.

(MLRA 10:9)

(Agriculture--Study and teaching)

GAVRILOVA, Yu. A., DZHIKIDZE, E. K., and GEKKER, V. D.

"The Role of Nutrition in the Pathogenesis of Dysentery" Proceedings of Inst. Epidem and Microbiol im. Gamaleya 1954-56

Interinstitute Scientific Conference on Problems of Dysentery [The following are identifications of personnel associated with the Institute of Epidemiology and Microbiology imeni N. F. Gamaleya who attended the conference held in Molotov, 4-7 April 1956] Inst. Epidem and Microbiol im. Gamaleya AMS USSR.

SO: Sum 1186, 11 Jan 57.

TIKHONCHUK, Yuriy Nikolayevich; KANSHIN, Mikhail Dmitriyevich; SOBOLEV,  
Samson Rodionovich; DAVRILOVA, Yu.P., redaktor; BOBROVA, Ye.N.,  
tekhnicheskiy redaktor

[Experience in organizing the transportation of small packages]  
Opyt organizatsii perevozok gruzov melkimi otpravkami. Moskva,  
Gos.transp.shel-dor.isd-vo, 1957. 91 p. (MLRA 10:7)  
(Railroads--Freight)

SIZYKH, Glafira Ivanovna; CAVRILOVA, Yuliya Pavlovna; LEONT'YEV, Andrey Pavlovich; CHERNICHKOV, Viktor Stepanovich; KHANDROS, Gersh Moshkovich; PODTSUYEVA, Lidiya Mikhaylovna; YANKIN, Sergey Mikhaylovich; GITKOVICH, V.K., inzh., red.; MEDVEDEVA, M.A., tekhn. red.

[Advanced work methods for workers engaged in freight operations] Peredovye metody truda rabotnikov gruzovogo khoziaistva. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1961. 91 p. (MIRA 15:3)  
(Materials handling) (Railroads---Freight)

GAVRILOVA, Yuliya Pavlovna; PUCHKOVA, Zinaida Andreyevna; CHERNOV,  
G.M., inzh., retsensent; SHISHKIN, G.S., inzh., red.;  
VOROTNIKOVA, L.F., tekhn. red.

[Handbook for the personnel working on freight-house ship-  
ment classification platforms] Posobie rabotnikam gruzo-  
sortirovochnoi platformy. Moskva, Transzheldorizdat, 1963.  
114 p. (MIRA 16:7)

(Railroads--Freight classification)



GAVRILOVA, Yuliya Pavlovna; PUCHKOVA, Zinaida Andreyevna; CHERNOV, G.M.,  
inzh., retsenzent; SHISHKIN, G.S., inzh., red.; VOROTNIKOVA,  
L.F., tekhn. red.

[Handbook for workers on freight-classification platforms] Po-  
sobie rabotnikam gruzosortirovochnoi platformy. Moskva,  
Transzheldorizdat, 1963. 114 p. (MIRA 16:6)  
(Railroads--Freight classification)

L 11889-66 EWT(1)/EWT(m)/EWP(t)/EWP(b) IJP(c) JD  
 ACC NR: AP5028017 SOURCE CODE: UR/0386/65/002/008/0373/0377

AUTHOR: Nikolayev, V. I.; Yakimov, S. S.; Dubovtsev, I. A.; Gavrilova, Z. G.

ORG: none

TITLE: Magnetic structure of the compound FeGe

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu (Prilozheniye), v. 2, no. 8, 1965, 373-377

TOPIC TAGS: iron alloy, germanium alloy, antiferromagnetic material, ordered alloy, Neel temperature

ABSTRACT: To check on the existence of magnetic order in the compound FeGe the authors investigated the Mossbauer spectra of  $\text{Fe}^{57}$  nuclei in this compound at temperature 77--500K. The sample was prepared by a procedure described by Ohoyama et al. (J. Phys. Soc. Japan v. 18, 589, 1963). The initial components were Armco iron and germanium. X-ray structure analysis has established that the sample produced contains a phase with hexagonal structure, having parameters  $a = 5.005 \text{ \AA}$  and  $c = 4.054 \text{ \AA}$ . Investigations of the magnetization of the sample in the interval 300--500K have shown that there are no ferromagnetic impurities with Curie points above room temperature. In the experiments on the Mossbauer effect, the FeGe sample was used as an absorber. The source of radiation was  $\text{Co}^{57}$  introduced in stainless steel. The Mossbauer spectrum of the  $\text{Fe}^{57}$  contained all six resolved components of the hyperfine structure, thus evidencing the magnetic splitting of the ground and excited levels of  $\text{Fe}^{57}$  and demonstrating directly that FeGe has an ordered magnetic structure at room

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L 11889-66

ACC NR: AP5028017

18.

temperature. The magnitude of the local magnetic field acting on the iron nuclei is in this case  $123 \pm 3$  koe. Analogous spectra were obtained also for other temperatures. It is also concluded that FeGe is antiferromagnetic. Extrapolation of the temperature dependence of the nuclear magnetic field to zero yields a value  $T_N = 411 \pm 2$  K for the Neel point of FeGe. Authors thank I. K. Kikoin for interest in the work, Yu. M. Kagan for discussions, N. N. Kuznetsov and V. I. Bogachev for help in adjusting the experimental setup, and P. N. Petrov and V. A. Somenkov for the x-ray structure analysis of the sample. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 25Aug65/ ORIG REF: 002/ OTH REF: 002

BC  
Card 2/2

GAVRILOVA, Z. I.

66796

USSR/Meteorological Research (Contd) May/Jun 1948  
Intensity of the nuclei with relation to the time  
of the year. Submitted by Academician V. V. Shuley-  
kin 8 May 1947.

66796

Applies V. V. Shuleykin's theory of "thermobaric  
waves" to spring cooling. Data obtained from studies  
corresponds favorably with theoretical data. Deter-  
mines the cooling period. Defines circulatory move-  
ment over Europe which has two cold nuclei and two  
warm nuclei. Studies variations in location and

"Is At Nauk SSSR, Ser Geograf 1 Geofiz" Vol XII,  
No 3

"The Spring Cooling in Europe," Z. I. Gavrilova,  
Cent Weather Forecasting Inst, 12 pp

USSR/Meteorological Research  
Weather Charts

May/Jun 1948

GAVRILOVA, Z. I.

32396. Gavrilova, Z. I. Garmonicheskiy analiz khoda temperatury vozdukha. Trudy Tsentr. in-ta prognozov, vyp. 14, 1949, s. 45-52, s kart.

SO: Letopis' Zhurnal'nykh Statey, Vol. 44

GAVRILOVA, Z.I.

Far Eastern monsoon. Trudy NIIAK no.3:57-69 '57. (MIRA 11:10)  
(Far East--Monsoons)

43431

S/169/62/000/011/043/077  
D228/D307

3.5000

AUTHORS: Gavrilova, Z.I. and Sycheva, Ye.F.

TITLE: A map construction method and the average isothermal surface height distribution.

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 11, 1962, 74, abstract 11B412 (Tr. N.-i. in-ta aeroklimatol., no. 16, 1962, 16-19)

TEXT: For practical purposes, particularly for determining possible aircraft icing heights, it is necessary to know the negative temperature surface distribution. A method is stated for constructing maps of average isotherm heights. By means of linear interpolation between the temperature and height values of adjacent isobaric surfaces (sea level 850, 850-700, 700-500, 500-300, 300-200 and 200-100 mb) the heights of the temperatures  $0^{\circ}$ ,  $-10^{\circ}$ ,  $-20^{\circ}$ ...  $-60^{\circ}$  were computed for the corresponding geographic points. The height of a given isotherm ( $H_T$ ) was ascertained from the formula:  $H_T = H_1 + K\Delta H$ . Here  $H_1$  is the height of the underlying isobaric

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A map construction method ...

S/169/62/000/011/043/077  
D228/D307

surface;  $\Delta H$  is the height difference for adjacent isobaric surfaces; and  $K = 1/[1 + (\Delta T_2/\Delta T_1)] \leq 1$ , where  $\Delta T_1$  and  $\Delta T_2$  are the temperature differences between a given isotherm and the temperature of the lower and the overlying isobaric surfaces respectively. The isotherm heights are drawn every 1 gp [Abstracter's note: Geopotential] km on maps plotted for January, April, July and October. In January the  $0^\circ$  isotherm at sea level is observed mainly to the south of  $45^\circ N$ . It is observed over the USSR only in extreme south-western districts at a height of 1 gp km and over central USA at the level 1-2 gp km. The  $-50^\circ$  isotherm stretches towards the coldest centers of North America and Eurasia. A map of the average heights of this surface in January is given. In the north and south of the hemisphere there are 2 independent  $-60^\circ$  surfaces at heights of 9 and 13-16 gp km respectively. A mean monthly temperature of  $-50^\circ$  is not observed to the north of  $65^\circ N$ . As one moves southwards over Eurasia and Africa, the  $-50^\circ$  isotherm gradually drops from 12-16 gp km in  $60-65^\circ N$  to 13-14 gp km in  $35^\circ N$ . The table of height differences for the January and July isotherms along  $150^\circ E$  reflects well the yearly air temperature variation. [Abstracter's note: Complete translation]

Card 2/2



S/169/62/000/011/047/077  
D228/D307

AUTHOR: Gavrilova, Z.I.  
TITLE: Method of constructing average air transfer maps  
PERIODICAL: Referativnyy zhurnal, Geofizika, no. 11, 1962, 75,  
abstract 118417 (Tr. N.-i. in-ta aeroklimatol.,  
no. 16, 1962, 50-51)

TEXT: Average air transfer is taken as steady motion along the resultant wind vector. The magnitude of the resultant wind vector determines the number of flow lines per unit of area. An increase in the rate in one area is allowed for in the form of the increase in the number of flow lines in it; a decrease is taken into account through the discontinuity of flow lines in a given area. One flow line corresponds to a rate of 1 m/sec at the level 850 and 700 mb and to a rate of 2 m/sec at the level 500, 300 and 200 mb.  
[Abstracter's note: Complete translation]

Card 1/1

ACCESSION NR: AT4028295

S/2667/63/000/024/0007/0017

AUTHOR: Gavrilova, Z. I.

TITLE: Method of calculating the tentative standard atmosphere

SOURCE: Moscow. Nauchno-issledovatel'skiy institut aeroklimatologii. Trudy\*, no. 24, 1963, 7-17

TOPIC TAGS: standard atmosphere, geometric altitude, geometric potential altitude, kinetic temperature, atmospheric pressure, atmospheric density, atmospheric viscosity, force of gravity

ABSTRACT: The author derives the basic formulas according to which the calculation of the tentative standard atmosphere was derived. The model of the tentative standard atmosphere was calculated up to 200 geometric km according to the values of the kinetic air temperature at reference altitudes assigned on the basis of preliminary processing of the Institutes of Hydrometeorological Service and Akademiya Nauk SSSR. The various data of the reference altitudes, together with the temperatures in degrees Kelvin, are presented in tables. Also presented in tables are the gradients of molecular temperature in  $^{\circ}\text{K}/\text{geopotential km}$ , the temperature gradient in  $^{\circ}\text{C}/\text{geopotential km}$ , the molecular weight at the reference altitudes, the

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ACCESSION NR: AT4028295

atmospheric pressure at the reference altitudes, and the values of the constants, atmospheric density at the reference altitudes. Formulas are given from which the atmospheric density, atmospheric viscosity, acceleration of the force of gravity, and the length of a free path of molecules were derived. Orig. art. has: 25 formulas and 7 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut aeroklimatologii (Scientific Research Institute of Aeroclimatology)

SUBMITTED: 00

DATE ACQ: 16Apr64

ENCL: 00

SUB CODE: AS

NO REF SOV: 000

OTHER: 000

Card 2/2

L 26685-65 EWT(1)/FCC GW  
ACCESSION NR: AR4046158

S/0169/64/000/008/A008/A008

13  
7  
B

AUTHOR: Gavrilova, Z. I.

TITLE: Method for computing a tentative standard atmosphere (TSA)

SOURCE: Ref. zh. Geofizika, Abs. 8A30

CITED SOURCE: Tr. N.-i. in-ta aeroklimatol., vyyp. 24, 1963, 7-17

TOPIC TAGS: standard atmosphere, meteorology, geopotential height, atmospheric pressure, atmospheric density, sound speed, free path length, air viscosity, gravity acceleration

ABSTRACT: The author presents the initial data and computation formulas which were used in developing a tentative standard atmosphere. The values of kinetic temperature at key heights were used to determine a standard atmosphere for heights of -2 to 200 km. The author gives expressions which were used in determining the values of geopotential height, temperature, molecular weight, pressure, density, speed of sound, length of free path, air viscosity and acceleration of gravity.  
V.M.

Card 1/1

ENCL: 00

SUB CODE: ES

ACCESSION NR: AT4028296

S/2667/63/000/024/0018/0022

AUTHOR: Gavrilova, Z. I.; Mertsalova, O. V.

TITLE: Method of treating radio sounding observations for calculating the standard atmosphere

SOURCE: Moscow. Nauchno-issledovatel'skiy institut aeroklimatologii. Trudy\*, no. 24, 1963, 18-22

TOPIC TAGS: standard atmosphere, atmospheric temperature, atmospheric pressure, atmospheric density, radio sounding observation, aerological station

ABSTRACT: The authors describe the utilization of material obtained from radio sounding observations and the method of its processing for obtaining temperature characteristics and pressure by latitude belts and, as a whole, for the northern hemisphere. Material is obtained from 225 stations on the northern hemisphere for the period covering January 1950 through June 1956. 145 of these stations were selected for calculating the standard atmosphere. The stations were located non-uniformly in the northern hemisphere. Best observations came from Europe, Japan, and North America. Observations were made on islands and on several weather ships in the oceans. The number of stations and observations per latitude are presented

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ACCESSION NR: AT4028296

in a table. An average interlatitude temperature was assumed in the calculations of the standard atmosphere. The majority of radio soundings were accomplished in the IGY (1957-59). In view of the comparatively small number of observations made at great altitudes, all the primary processing was produced by season. No less than 10 observations were used for determining average values, and no less than 50 in each region were used for determining recurrences of observations. Orig. art. has: 3 tables

ASSOCIATION: Nauchno-issledovatel'skiy institut aeroklimatologii (Scientific Research Institute of Aeroclimatology)

SUBMITTED: 00

DATE ACQ: 16Apr64

ENCL: 00

SUB CODE: AS

NO REF SOV: 006

OTHER: 000

Card 2/2

ACCESSION NR: AT4028300

S/2667/63/000/024/0061/0065

AUTHOR: Gavrilova, Z. I.

TITLE: A comparison of the temperature, pressure, and density of the tentative standard atmosphere with the corresponding data on the northern hemisphere and 30° latitude belts

SOURCE: Moscow. Nauchno-issledovatel'skiy institut aeroklimatologii. Trudy\*, no. 24, 1963, 61-65

TOPIC TAGS: standard atmosphere, atmospheric temperature, atmospheric pressure, atmospheric density, latitude belt, northern hemisphere

ABSTRACT: Two conditions were fulfilled in constructing the tables of the tentative standard atmosphere for a layer of 0-30 geometric km high: 1) the tentative standard model of the atmosphere must be close to the thermodynamic characteristics of the atmosphere obtained by observation, and 2) it must be near the standard atmosphere of GOST 4401-48 (tablitsy\* standartnoy atmosfery\* (standard atmosphere tables) Standartgiz, M., 1954). The author makes the comparisons noted in the title as well as the relative deviations of temperature pressure and density which are presented in tables. He considers that in the construction of a new model of a standard

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ACCESSION NR: AT4028300

atmosphere, more accuracy is necessary in the temperature curve in the layer of 0-30 km. Multiyear annual pressure and density for the northern hemisphere and the belt of 30-60° NL is the nearest to the pressure and density of the tentative standard atmosphere. The relative deviations of pressure and density for the belts 0-30 and 60-90° NL are considerably more. As could be expected, changes with an altitude of relative deviations of density and temperature are opposite in sign and their curves have a mirror image. The relative deviations of pressure for the northern hemisphere and the belt of 30-60° NL is comparatively small in the layer of 0-30 km. For the belts of 0-30 and 60-90° NL, the greatest comparative deviations of pressure are noted at altitudes of 9-13 km. Orig. art. has: 3 tables and 3 formulas.

ASSOCIATION: Nauchno-issledovatel'skiy institut aeroklimatologii (Scientific Research Institute of Aeroclimatology)

SUBMITTED: 00

DATE ACQ: 16Apr64

ENCL: 00

SUB CODE: AS

NO REF SOV: 004

OTHER: 000

Card 2/2



L 54510-65 EWT(1)/FCC GW

ACCESSION NR: AT5013681

UR/2667/65/000/029/0003/0014

AUTHOR: Gavrilova, Z. I.

TITLE: A concise review of aeroclimatological investigations in the southern hemisphere

SOURCE: Moscow. Nauchno-issledovatel'skiy institut aeroklimatologii. Trudy, no. 29, 1965. Nekotoryye voprosy aeroklimatologii yuzhnogo polushariya (Some problems in the aeroclimatology of the Southern Hemisphere), 3-14

TOPIC TAGS: climatology,<sup>✓</sup> aeroclimatology, southern hemisphere, atmospheric circulation, atmospheric turbulence, wind velocity, solar radiation, Antarctic meteorology

ABSTRACT: This is a review of the literature, mostly recent, devoted to the study of atmospheric processes over the southern hemisphere and its individual regions. It should be noted that 13 of the 50 references on which the review is based are Soviet, but except for those dealing with Antarctica tend to contain less factual data than the remaining references which, for the most part, are in English. The purpose of the paper is to introduce the collection of articles in which it appears - Nekotoryye voprosy aeroklimatologii yuzhnogo polushariya (Some

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L 54510-65

ACCESSION NR: AT5013681

problems in the aeroclimatology of the Southern Hemisphere). Particular attention in this review is given to available information on the heights of isobaric surfaces, wind velocities, atmospheric water vapor, availability of data for the oceans, exchange between the atmosphere and ocean, amount of solar radiation, general circulation of the atmosphere, atmospheric turbulence and Antarctic studies. Evaluation of the summarized information presented indicates that, despite the fact that it is still impossible to make detailed analyses of meteorological processes in certain regions of the southern hemisphere due to lack of observational data, it is already possible to undertake extensive studies of southern hemisphere processes. Orig. art. has: 1 table.

ASSOCIATION: Nauchno-issledovatel'skiy institut aeroklimatologii, Moscow (Scientific Research Institute of Aeroclimatology)

SUBMITTED: 00

ENGL: 00

SUB CODE: ES

NO REF SOV: 013

OTHER: 037

Card

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L 54509-65 EWT(1)/FCC GW

ACCESSION NR: AT5013682

UR/2667/65/000/029/0015/0028

AUTHOR: Gavrilova, Z. I.

TITLE: Seasonal and annual characteristics of the atmosphere in the southern hemisphere

SOURCE: Moscow. Nauchno-issledovatel'skiy institut aeroklimatologii. Trudy, no. 29, 1965. Nekotoryye voprosy aeroklimatologii yuzhnogo polushariya (Some problems in the aeroclimatology of the Southern Hemisphere), 15-28

TOPIC TAGS: atmospheric temperature, atmospheric geopotential, climatology, Antarctic meteorology, aeroclimatology, southern hemisphere

ABSTRACT: This paper presents the mean seasonal and annual values of temperature and geopotential over the southern hemisphere at the 100-mb level, as well as the annual distribution of temperature over individual stations. It also includes a comparison of temperature and its distribution over the southern and northern hemispheres. Data for the period 1957-1962 were used (from data published at Asheville, North Carolina). Mean monthly temperature data were used to determine the seasonal temperature values for the four seasons and then seasonal values were found for 10° latitude zones. The seasonal temperature values over each 10° lati-

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L 54509-65

ACCESSION NR: AT5013682

tude zone made it possible to determine seasonal and annual temperatures for the ground level and each isobaric surface over the southern hemisphere. Similar computations were made for pressure at sea level and at various isobaric surfaces. It was found that the troposphere of the southern hemisphere is colder than the troposphere of the northern hemisphere during all seasons except summer. However, in December-February, the temperature difference between the hemispheres at the corresponding surfaces is approximately half the June-August value (in June-August the northern hemisphere troposphere is approximately twice as warm as the southern hemisphere troposphere in December-February) (Fig. 1 of the Enclosure). In the high latitudes of the southern hemisphere at the 200-mb level and aloft, the seasons are clearly defined. The temperature difference between winter and summer at the 100-mb level in the zone 80-90°S is 40C, whereas in the northern hemisphere it is only 25C (Fig. 2 of the Enclosure). Beginning with the 200-mb level at 60-90°S, there is a two-peaked annual distribution of temperature in which a seasonal distribution is reflected. The temperature regime of the atmosphere of the southern hemisphere is influenced by great expanses of the ocean, the Antarctic continent and (apparently to a greater extent than in the northern hemisphere, especially at surfaces above 200 mb) the position of the earth relative to the sun. Orig. art. has: 6 figures, 6 tables and 1 formula.

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L 54509-65

ACCESSION NR: AT5013682

ASSOCIATION: Nauchno-issledovatel'skiy institut aeroklimatologii, Moscow (Scientific Research Institute of Aeroclimatology)

SUBMITTED: 00

ENCL: 04

SUB CODE: ES

NO REF SOV: 005

OTHER: 003

Card 3/6

GAVRILOVA, Z. P.

Maloz, N.F., Tesler, G.G., Gavrilova, Z.P. and Krutshchikova, A.I. (All-Union Scientific Research Institute of the Sulfide Lignin and Hydrolysis Industry),  
A comparative evaluation of the different methods of obtaining tri-oxyluteria  
from xylose, 277-62

immediate source clipping

KALYUZHNYAYA, P.F.; PIMENOVA, K.N.; GAVRILOVA, Z.P.

Rate of discharge of iron, nickel, and chromium ions during the  
electrolytic deposition of a Fe-Ni-Cr alloy. *Ukr.khim.zhur.* 30  
no.11:1161-1167 '64. (MIRA 18:2)

~~L 17820-65~~ EWT(m)/EWP(t)/EWP(b) Pad IJP(c)/ASD(m)-3 JD/HW/JG  
ACCESSION NR: AP4045198 S/0080/64/037/009/2060/2061

AUTHORS: Kalyuzhnaya, P.F.; Pimenova, K.N.; Gavrilova, Z.P. *B*

TITLE: Internal stresses in electrolytic deposits of Fe-Ni-Cr alloy

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 9, 1964, 2060-2061

TOPIC TAGS: Fe Ni Cr alloy, electrodeposition, electroplating, internal stress, stressed electrodeposit, hydrogen effect, anodic pretreatment, alternating current application, cathode surface cleaning, oxide film formation, electroplate adhesion, current yield

ABSTRACT: The possibility of overcoming the effect of hydrogen on the properties of Fe-Ni-Cr cathodic electrodeposits by applying an alternating current on the direct current in the electrolysis process, and by anodic pretreatment of the cathodic surface was investigated. Application of AC (using AC:DC current density ratios of 1:3, 1:4, 1:6, 1:8, 1:12) somewhat reduced stresses in the electrodeposit, but independently of the current density ratios. However, the current yield decreased, especially at high AC current densities. Preliminary 20-30 second anodic treatment of the cathode surface with 10% NaOH cleaned the surface of impurities and promoted formation.

Cord. 1/2



L 17820-65

ACCESSION NR: AP4045198

tion of a thin oxide film which was not strongly bonded to the metal and readily combined with the hydrogen at the cathode at the start of the electrolysis. The Fe-Ni-Cr deposits on such pretreated cathodes have less stresses and improved adhesion to the base metal. Prolonged anodic treatment of the steel samples caused formation of the oxide film as a separate phase which hindered formation of a strong bond between the electrodeposit and the base

ASSOCIATION: None

SUBMITTED: 18Jul63

ENCL: 00

SUB CODE: GC

NR REF SOV: 003

OTHER: 000

Card 2/2

ALEKSEYEV, V.R.; GAVRILOVA, Z.S.; KALIMULIN, S.M.; MORALEV, V.M.;  
HUZHNOV, S.V.; SHPAK, N.S.

Problem of the ancient rare metal placers of the eastern  
part of the Aldan Plateau. Dokl.AN SSSR 144 no.2:409-411 My  
'62. (MIRA 15:5)

1. Aldanskaya ekspeditsiya Vsesoyuznogo aerogeologicheskogo  
tresta. Predstavleno akademikom N.M.Strakhovym.  
(Aldan Plateau--Rare earth metals) (Geological time)

15-57-4-4975  
Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 4,  
p 132 (USSR)

AUTHORS: Chemodanov, D. I., Gavrilova, Z. Ya., Petrova, S. V.

TITLE: Autoclave Processed Clay-Base Silicate Materials  
(Issledovaniye avtoklavnykh silikatnykh materialov  
na osnove suglinkov)

PERIODICAL: Sb. nauch. tr. Tomskiy inzh.-stroit. in-t, 1956,  
Vol 1, pp 3-7

ABSTRACT: Argillaceous soils of the Kopylovka deposit (Western  
Siberia) and limestone slaked by heating may be used  
for manufacture of lime-silica products. The lime-  
stone is obtained from one of the deposits of the  
Novosibirsk Region. The chemical composition of the  
argillaceous soil is as follows (in percent):  $\text{SiO}_2$ --  
68.66,  $\text{Al}_2\text{O}_3$ --12.44,  $\text{Fe}_2\text{O}_3$ --8.30,  $\text{CaO}$ --0.70,  $\text{MgO}$ --  
1.20,  $\text{Na}_2\text{O}$  and  $\text{K}_2\text{O}$ --1.21;  $\text{SO}_3$ ---, other constituents--

Card 1/2

Autoclave Processed Clay-Base Silicate Materials (Cont.)<sup>15-57-4-4975</sup>

6.50. A silicate brick of satisfactory quality was obtained from a raw material mixture of argillaceous soil with 8 percent active calcium and magnesium oxides.  
Card 2/2

S. P. Sh.

CHEMODANOV, D.I.; GAVRILOVA, Z.Ya.

Investigating the effect of clay on properties of autoclave  
silica-lime materials. Trudy TGU 145:141-147 '57.

(MIRA 12:3)

1. Kafedra obshchey khimii i stroitel'nykh materialov Tomskogo  
inzhenerno-stroitel'nogo instituta.  
(Sand-lime brick--Testing)

L 58455-65 ENT(1)/EPA(s)-2/EEC(t)- Pt-7/Pl-4 LJP(c) GG

ACCESSION NR: AP5013670

UR/0386/65/001/001/0036/0039

AUTHOR: Gavrilova-Podol'skaya, G. V.; Yudin, A. L.; Lundin, A. G.

TITLE: Isotopic effect in the ferroelectric  $\text{Na}_3(\text{SeO}_3)_2$

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniya, v. 1, no. 1, 1965, 36-39

TOPIC TAGS: isotopic effect, deuterium substitution, sodium, hydroselenite, ferroelectric property

ABSTRACT: A study was made of the temperature dependence of the dielectric constant of powdered samples of  $\text{NaD}_3(\text{SeO}_3)_2$  in order to explain the nature of the spontaneous polarization in this compound and determine the isotopic effect when the hydrogen is replaced with deuterium. The sodium deuterioselenite was obtained by crystallization from a solution in  $\text{D}_2\text{O}$  (99.5% pure), in which the calculated amounts of  $\text{Na}_2\text{SeO}_3$  and  $\text{D}_2\text{SeO}_3$  were dissolved. Tablets 1--2 mm thick and 14 mm in diameter were prepared from the  $\text{NaD}_3(\text{SeO}_3)_2$  and placed between the electrodes of a parallel-plate capacitor. The capacitance was measured with the aid of a conventional bridge circuit at about 200 kcs. The measurements were made in the temper-

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ature range from -170 to 0°C. The temperature dependence of the dielectric constant of polycrystalline  $\text{NaH}_3(\text{SeO}_3)_2$  has a peak at -79°C, which coincides with the previously determined Curie point of this ferroelectric. The temperature dependence of the dielectric constant of  $\text{NaD}_3(\text{SeO}_3)_2$  duplicates that of  $\text{NaH}_3(\text{SeO}_3)_2$ , but is shifted 50° in temperature, with a peak at -29°C, which can be assumed to be the Curie point of the deuterioselenite. Thus, the shift of the Curie point of the hydroselenite when the hydrogen is replaced by deuterium is of the same order of magnitude as that in  $\text{KH}_2\text{PO}_4$  (90°),  $\text{KH}_2\text{AsO}_4$  (66.4°), and  $\text{Ag}_2\text{H}_3\text{IO}_6$  (40°). It can be assumed on this basis that these ferroelectrics have a similar spontaneous-polarization mechanism in which an important role is played by the ordering of the hydrogen bonds. Orig. art. has: 1 figure.

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